

WHAT IS CLAIMED IS:

1. A processor system, which is provided with a built-in processor, a memory controller, an external bus interface that can connect an external processor
5 from outside of a single semiconductor substrate, and a connection unit that mutually connects the built-in processor, the memory controller and the external bus interface on the single semiconductor substrate.
- 10 2. The processor system according to claim 1, wherein the connection unit includes a crossbar switch.
- 15 3. The processor system according to claim 1, wherein the connection unit includes a common bus.
- 20 4. The processor system according to claim 1, further comprising:
a second built-in processor connected to the connection unit on the semiconductor substrate.
- 25 5. The processor system according to claim 1, comprising:
enabling means for enabling either the built-in processor or the external bus interface.
6. The processor system according to claim 5,

wherein the enabling means enables the built-in processor and the external bus interface independently, respectively.

5 7. The processor system according to claim 1, wherein the built-in processor and the external bus interface are connected through a bus common to the connection unit.

10 8. The processor system according to claim 1, wherein the built-in processor and the external processor use in common programs stored in memory controlled by the memory controller.

15 9. The processor system according to claim 1, further comprising:

 an image data transfer bus connected with the connection unit; and

20 an image output device interface or an image input device interface connected with the image data transfer bus on the semiconductor substrate.